



Failure to Control Unexpected Hazards

Lawrence Berkeley National Laboratory Lessons Learned

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Concern Statement: During clean-up of an outside area, an electrical conduit arrangement was uncovered. The prescribed hazardous energy control process for the conduit was not followed. An employee cut into energized electrical wires in an attempt to cut back the conduit arrangement that was assumed to be de-energized. No one was injured and no electrical shock occurred.

Applicable to: All Lab staff

Incident: A recently discovered electrical conduit arrangement was assumed to be de-energized because an electrical transformer in this area was decommissioned about 10 years previous. An employee began removing the electrical conduit using a power saw, cut into the conduit, and shorted a 120 VAC energized electrical wire. Since no injury occurred, there was a delay in reporting.



Before Cleanup



After Cleanup



Conduit Arrangement

Cause: The investigation of this event revealed a number of causes.

1. Staff was not familiar with the potential hazards or the appropriate actions to take when encountering unexpected conditions.
2. The assumption made was that the electrical wiring was de-energized because the electrical transformer had been removed.
3. The workgroup was not authorized to work on electrical distribution system for Lab buildings.

Recommended Actions:

- Managers should stress to their employees the right/responsibility to stop work not only for imminent hazards (STOP WORK policy) but also when new conditions or new hazards are discovered. Use STAR: Stop, Think, Act, and Review as a tool to help you reduce the probability of human error and avoid a possible injury. Stop and think before you act and then afterwards review your decisions and learn from experience. A questioning attitude can save your life!
- Managers should ensure their employees understand the following Lab policies:
 - All electrical components are to be assumed energized until positively proven otherwise. Positively proven means unplugged in the case of plug and cord electrical components, or locked/tagged for more complex equipment. You must also test the component to verify zero energy.
 - Only Facilities Division electricians may work on the electrical distribution system for Lab buildings.
- Managers should stress to their employees that abnormal safety events, including near miss accidents, should be reported promptly to divisional management. Past focus has been on reporting injuries, but all abnormal safety events should be reported.

Further Information

For further information or support please contact Richard DeBusk, Occupational Safety Manager (x2976).

For other lessons learned, go to: http://www.lbl.gov/ehs/html/lessons_learned.htm

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